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SECURITY INFORMATION

CENTRAL INTELLIGENCE AGENCY

REPORT

# INFORMATION REPORT

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50X1-HUM

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SUBJECT Ground Station and Receiver for Control of the Wasserfall Guided Missile

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THIS IS UNEVALUATED INFORMATION

## 1. Order for ground stations

In the beginning of June 1951, the management of RFT Köpenick was expecting an order from the USSR to build 100 ground stations for guided missiles.\* 50X1-HUM

## 2. Assembly of the Strasburg receiver

After the end of May 1951, when 1700 complete Strasburg receivers had been assembled by RFT Köpenick for delivery to the USSR, no additional complete receivers were assembled at this plant\*. Since that date, only the separate parts of the receiver have been exported to the USSR for assembly.

## 3. Russian officials concerned with the program

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a. One fnu Soloev acts at RFT Köpenick as control and acceptance official for the Strasburg receivers. He has no military rank. He is technically well informed on the details of the Wasserfall guided missile.

b. The Russian in charge of the Wasserfall guided missile project in the USSR is one fnu Kaporin, a Stalin Prize winner. He always wears civilian clothes. He has visited Berlin at various times. It is thought that it is he who will bring a decision from the USSR to Köpenick about the building of the ground stations (see paragraph 1).

## 4. Details of the ground station

### a. Modulation, etc.

Besides the stages given below, there are the frequency doubling stage with 1 x LG-50 tube and a power stage with 2 x LG-50 tubes. The various stages are in separate containers connected with the power supply. The degree of modulation is 40%, with a peak output of 120 w and 40 w (sic). The transmitter is grid modulated.

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b. Modulation unit

Nine different sinusoidal control frequencies are produced in this unit. One of these is 200 Hz for the firing command (Zündkommando); the other eight frequencies are used in four selected ways.

c. Multivibrator

This vibrates at 5 Hz or 25 Hz, as selected. In this way it is possible to operate the rudder (Seitensteuerung) with 5 Hz and the elevators (Höhensteuerung) with 25 Hz or vice versa with the one frequency.

d. Indicator unit

Here, are recorded readings of the command value (Kommandowert) on a scale of 0.8 - 0 - 0.8, and also the modulator voltage and the degree of modulation.

e. Control column (Knüppel)

See the attached diagram and the errors determined, which are listed at the end of this report.

f. Antenna

It has a cross-dipole with "Symmetrietopf der Sender unsymmetrischen Ausgangs".

g. Balanced antenna (Künstliche Antenne)

This is switched in by means of the S.E. switch.

h. Control receiver

Similar to ground station receiver, but it has only the LF part, with 9 LF circuits. (See b above)

i. Target indicator (Taurechner)

This is contained in a comparatively large box with the equivalent circuit resistance (see diagram).

Control Column (Knüppel)Table of Errors

Kommando u. Ersatzgeber	H F Seite	H F Höhe	N F Seite	N F Höhe
0	0	0	+0.48%	+0.48%
-0.4	-0.37%	0.39%	-0.39%	-0.4%
-0.8	-0.80%	-0.82%	-0.81%	-0.81%
+0.4	+0.32%	+0.30%	+0.37%	+0.4%
+0.8	+0.74%	+0.80%	0.76%	+0.81%

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\* Comment: Concerns in Berlin-Köpenick under VVB RFT, as of 1 January 1951, included the Funkwerk Köpenick and the Zentrallaboratorium für Signal- und Sonderanlagen Köpenick, both located at Wendenschloss-Strasse 154-158; the two concerns were consolidated as of 1 June 1951. Strasbourg airborne receivers were previously reported to be assembled at the Zentrallaboratorium für Signal- und Sonderanlagen; see

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